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EVOLUTION OF AMERICAN AGRICULTURE

By

Abner E. Woodruff, C.E.

INTRODUCTION

BY

Wm. D. Haywood

PUBLISHED BY

Agricultural Workers Industrial Union No. 400.

I.W.W.

EVOLUTION *of* AMERICAN AGRICULTURE

57505D

By
ABNER WOODRUFF, C. E.

Illustrated by Dust
Published by Agricultural Workers Industrial Union
No. 400 I. W. W.

THE PREAMBLE
OF THE INDUSTRIAL WORKERS OF THE WORLD

The working class and the employing class have nothing in common. There can be no peace so long as hunger and want are found among millions of working people and the few, who make up the employing class, have all the good things of life.

Between these two classes a struggle must go on until the workers of the world organize as a class, take possession of the earth and the machinery of production, and abolish the wage system.

We find that the centering of management of the industries into fewer and fewer hands makes the trade unions unable to cope with the ever growing power of the employing class. The trade unions foster a state of affairs which allows one set of workers to be pitted against another set of workers in the same industry, thereby helping defeat one another in wage wars. Moreover, the trade unions aid the employing class to mislead the workers into the belief that the working class have interests in common with their employers.

These conditions can be changed and the interest of the working class upheld only by an organization formed in such a way that all its members in any one industry, or in all industries if necessary, cease work whenever a strike or lockout is on in any department thereof, thus making an injury to one an injury to all.

Instead of the conservative motto, "A fair day's wage for a fair day's work," we must inscribe on our banner the revolutionary watchword, "Abolition of the wage system."

It is the historic mission of the working class to do away with capitalism. The army of production must be organized, not only for the every-day struggle with capitalists, but also to carry on production when capitalism shall have been overthrown. By organizing industrially we are forming the structure of the new society within the shell of the old.

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INTRODUCTION

This is not intended so much as an introduction to the book, but rather to acquaint the reader with the organization which makes this interesting little volume possible, and promises the likelihood of more and greater works—it being the intention to publish similar hand-books on all the basic industries.

The book does not purport to be a history of the agricultural industry, but merely a condensed story of the evolution of the tools, the machinery, and the remarkable modern methods of agriculture, horticulture, cattle raising, etc., presenting the wonderful development of the production of all things essential to the life and happiness of people, the control of which by all the people would make the world a good place in which to live.

Incidentally herein is shown the way in which corporations have grown and gigantic trusts have been formed, privately owning vast tracts of land, immense implement factories, stock yards, cold storage and canning plants; also the mines and railroads, thus controlling the necessities of life of which food stuff forms the greater part. But nearly all things are within the greedy grasp of these combined capitalists. These vicious institutions are sapping the very life blood of the human race.

You must realize that this infamous system of robbery amounts in the end to crime worse than murder. The trusts have so developed that they now have their fangs fastened deep into the very heart of society. Their merciless schemes and operations are conceived and carried out for profit and personal

aggrandizement alone. It is done with the cognizance, connivance, and endorsement of governments the world over, with the result that there are millions of underfed, overworked, uneducated toilers with nothing to look forward to but work, work, —unceasing labor from the cradle to the grave.

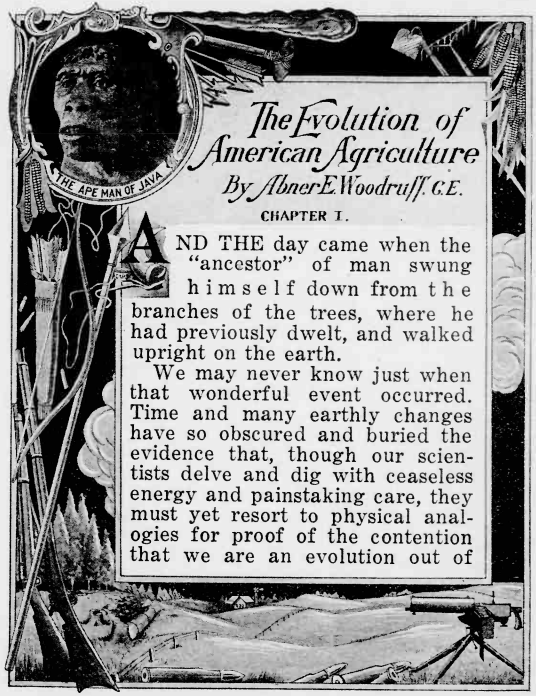
The I. W. W. has nothing but words of the bitterest condemnation for individuals, institutions or governments responsible for the terrible conditions which prevail. On the other hand, the I. W. W. is earnest in its commendation of the great minds that conceived and invented the improved machinery and organized the great industries which we understand through social effort would contribute to the welfare and upbuilding of the people of the world.

The Industrial Workers of the World was organized to improve the conditions of the working class and its efforts have been directed unceasingly to this end. Education is regarded as the greatest weapon that the exploited workers can hope to attain. This book is published for the purpose of education—written, printed and paid for by men who have been condemned and in many instances imprisoned as hoboes and vagrants; more than this, they own the print shop where the work is done.

It has been said that every institution is but the lengthening shadow of a single man. This is not true when speaking of the Industrial Workers of the World, as it has required the united efforts of many individuals to cultivate the idea which has become imperishable; but here, as a matter of record, we should mention the name of Elwood Moore, who contributed a considerable legacy that he had inherited, and which he gave to the I. W. W. for organization and educational purposes. This was just prior to the formation of the Agricultural Workers' Industrial Union which was launched at a convention held in Kansas City in the spring of 1915.

Immediately following the organizing of the A. W. O. of the I. W. W., the name of which afterwards was changed to the Agricultural Workers Industrial Union No. 400, I. W. W., the conditions of the migratory workers began to improve, wages were increased, hours reduced, living conditions made comparatively better; but the work of education in the agricultural industry, like all others, has just begun and remains to be carried on by the workers until the earth is redeemed from private ownership and the spirit of co-operation prevails. Use and occupancy will then be the only title to land and its products. Industrial Freedom will then have been attained.

Wm. D. Haywood.



The Evolution of American Agriculture

By Abner E. Woodruff, C.E.

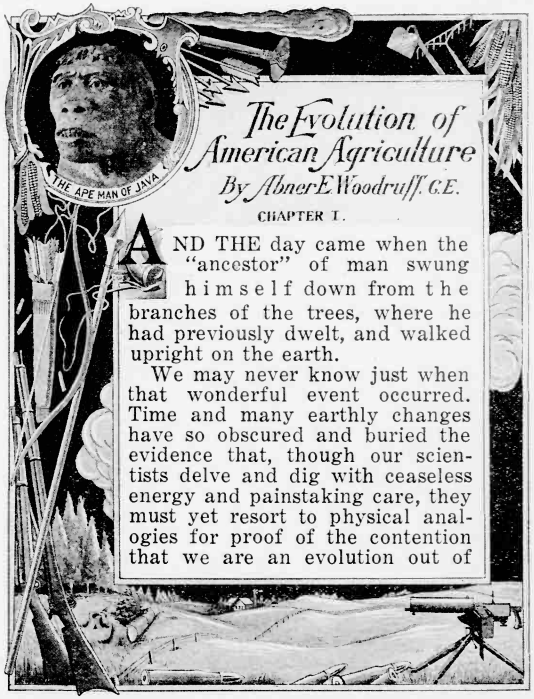
CHAPTER I.

AND THE day came when the "ancestor" of man swung himself down from the branches of the trees, where he had previously dwelt, and walked upright on the earth.

We may never know just when that wonderful event occurred. Time and many earthly changes have so obscured and buried the evidence that, though our scientists delve and dig with ceaseless energy and painstaking care, they must yet resort to physical analogies for proof of the contention that we are an evolution out of another and primitive species. The "link" to complete the chain may be missing—the **absolute** connection of the human race with the "tree dwellers" may never be established—but, among the educated and enlightened, it will never be doubted in the least.

In the realm of Biology, the validity of the Law of Evolution cannot well be questioned, and we are quite justified in any attempt we may make to re-

INTENTIONAL SECOND EXPOSURE



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construct that romantic period when the hairy denizens of the tree tops went through those changes that finally developed a creature bold enough to descend upon the ground, club in hand, and battle with the carnivorous beasts for the coveted right to live. We may well picture the first tree dweller that developed the human thumb—the thumb set so far forward on the hand and of such length that it could be opposed to the other fingers—and imagine the advantages he possessed over his fellows amid the leafy canopies. We may see him plucking the fruits and nuts with greater dexterity; swinging from limb to limb with greater certainty of grasp; clutching at the throat of his adversary with a deadlier grip; striking with the fist instead of slapping with an open paw; and, for the first time wielding a club in the enforcement of his developing will. How formidable this human handed tree dweller must have been to the other inhabitants of the forest! And how wonderful that provision of nature which transmitted the thumb on down the line of his descendants!

The law of claw and fang decided disputes among the tree dwellers and, most of all, it decided the question of mating. The human-handed one, by reason of his greater ability to fight—through a better courage, generated by a consciousness of physical superiority—compelled the reproducton of his type through the more perfect females of his kind.

Some have said that hunger first drove the developing "man" to forsake the trees and seek his food upon the ground, but I incline to the belief that the greater range of experiences possible to the human-handed one so developed his mental faculties, so increased his courage, that his first excursions afield were the result of experiment, the product of pure daring, and in the nature of adventure. I like to imagine that first foray into the formerly forbidden realm—the hesitating progress outward from the shadows, club in hand—the savage dash of the wild dog—the sure swing of the weapon—the crash of wood on flesh—the yelp—the angry snarl—the crash again—blow on blow—the savage shrieks—the howls of pain—the panic stricken flight of the dog—and the new "man," bleeding, bellowing in his fury, brandishing his club, but **victorious**—master of the scene.

From encounter to encounter man went, contending for every inch of his progress. Gradually he became more erect upon his hips; his feet and legs changed to conform to his new environment; the set of the head upon the spinal column changed; the brain-pan enlarged; the brain developed; the infinity of new experiences produced a higher intelligence and man become truly **man.** At first he dwelt in caves, from which he drove the wolf and bear. He lived on fruits and nuts and roots and berries; on birds and small wild creatures which he caught with greatest cunning. Then he discovered fire and later, the art of cookery.

Wonderful! Wonderful was the discovery of fire! It is the turning point in prehistoric life. It set man completely apart from the balance of animated nature. It divorced him from the beasts and pointed the way to the conquest of the Earth. It extended his hunting grounds to the rivers, lakes and seas—for now, through cookery, he could safely eat the fish. It broadened his range of travel and robbed

the winter of its frigid terrors. No wonder he worshiped the fire! Around it they gathered to prepare their food, to bask in its warmth, to moon and dream of their adventures, to counsel with their fellows, and weave fantastic notions that finally resolved themselves into the rudiments of religion.

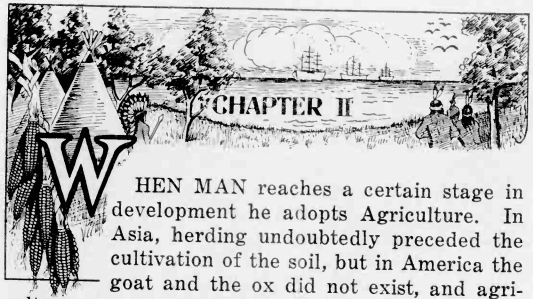
How precious was the fire! It must not be lost! At first the aged, the young, the crippled, guarded the sacred flames; but later this duty devolved upon the woman. In the last period of her pregnancy and while the child was too young to be carried about, the woman kept the holy vigil. A natural conservator, she readily took charge of what was brought to the fire, and presently assumed command of those who came to the fire. Woman was master, and through her was born the institution of the family. Through her also was born herding, for the wounded kid, healed by her hand, became the domesticated goat and fed about the slopes near the cave under her watchful care.

In her hours of leisure she wandered by the brook and gathered the plants that she knew were good to eat. One day she pulled the weeds and grasses from around a plant that she hoped to gather later, when it should be full grown and edible. By this act Agriculture was born, and for ages following woman was the agriculturist.

So long did woman till the soil with pointed stick and stone hoe and man hurl the spear and draw the bow that a difference in the structure of male and female shoulder blades resulted, and today a woman cannot hurl a stone with any kind of precision. The memory of these ages when woman was the agriculturist comes down to us from barbaric, through

historic times, for all the ancient gods of agriculture had female names and feminine attributes. All Hail—Agriculture! But better, All Hail—Woman! Woman, who has brought us the best that civilization can afford!

NO WONDER HE WORSHIPPED FIRE



CHAPTER II

WHEN MAN reaches a certain stage in development he adopts Agriculture. In Asia, herding undoubtedly preceded the cultivation of the soil, but in America the goat and the ox did not exist, and agriculture was immediately imposed upon the hunting age.

The trend of agriculture was evidently from the South toward the North, and especially is this Northward trend evident in the case of the Indian corn, the principal agricultural staple of the Indian dietary.

Without referring to the Aztec race (an agricultural people who inhabited Mexico and were distinct from the Indians), we may say that the inhabitant of this continent North of the Rio Grande lived in some twelve different ethnic, or radical environments which produced as many different types of Indians. Natural environment determines the nature of the food supply for man and determines also what his clothing needs to be, what shelter he requires, and, through these what his domestic industries, and personal and social customs shall be. So in the Arctic region, where the major portion of the year is intensely cold, where the country is a barren, treeless waste, we may find a people dependent entirely upon animal life for food, clothing and tent-

age, engaging in hunting, fishing and bird nesting and without suspicion that such a thing as agriculture can exist. But in a region like the Atlantic slope of the Appalachian Mountains, where there are rich lowlands, fertile foot hills, streams full of fish, abundant plant life, great forests, and a climate favorable to agriculture, we may expect to find a people with a considerable range of choice in their food supply, clothed in the lighter skins or even in woven cotton garments, and living in hovels constructed from wood or mud or other permanent material, and rendered sedentary by the practice of some form of agriculture, though hunting and fishing are yet followed as equal sources of subsistence.

Indeed, at the time of the landing of the first colonists upon these shores from England in 1607, we find that agriculture was a main source of life for all that Indian population along the St. Lawrence and around the Great Lakes, on the Atlantic Slope, throughout the Gulf Coast country, in the great Mississippi Valley (exclusive of the Great Plains), and in the Pueblo country of the arid Southwest, though interested writers and so-called historians would have us believe that they were principally nomads and that agriculture was the exception rather than the rule. In the Arctic region, in the Yukon MacKenzie section, on the Western plains, and in the Rocky Mountains conditions were unfavoroble to Indian agriculture, while on the North Pacific Coast, in the Columbia and Frazer River regions, and in California and Oregon, animal and native plant foods were so abundant and easily available that there was no inducement for the Indian to take up the cultivation of the soil.

In this chapter it is our purpose to discuss only the agricultural Indians and especially the Eastern Indians, who first came in contact with the invading white man and who led in such resistance as the red man could oppose to the ruthless trampling of his natural rights and the certain destruction of his race.

The diet of the red men varied with the season and the food supply, ranging from fully three-fourths vegetable in the South to fully three-fourths animal in the North, and in all their agriculture, **corn** was the most important plant known to them. They also cultivated beans, squash, pumpkins, sunflowers, gourds, tobacco and, in the South, the cotton plant. Eighteen varieties of cultivated plants were known to them and fully one hundred other plants, uncultivated, furnished them further addition to their food supply; among these, of course, being acorns, berries, wild fruits, nuts, roots and seeds.

Not only did they cultivate these plants, but they had developed an effective storage and preservative system. Corn, beans, acorns, chestnuts, etc., were dried upon mats in the open air and stored in granaries or cribs. Onions, artichokes, corn, etc., were buried in pits. Pumpkins and squash were covered with piles of leaves and hay. Peppers, gourds, grapes, passion flower, sunflowers and tobacco were hung up in their houses. Venison was dried in the sun, fish were cured in the smoke of a greenwood fire as also were oysters, which they strung on a string. Drinks they had none, except mild infusions of leaves and willow bark which they drank as medicine. Fermented or distilled liquors (fire water) were introduced by the white men.

Corn was the principal cultivated plant of the agricultural Indians. Evidently originated in the tropics, it had found its way Northward by the adoption of the tribes, to a point far up the Ottawa River in Canada, where it was observed by Cartier, the French explorer, as early as 1534. This plant has played a great part in the economic and political history of America and may be justly said to be the greatest food producing plant now grown. The Jamestown and Plymouth colonies only became permanent as they were able to get supplies of this cereal from the Indians and by adopting its cultivation in their early fields. Also in the wars which soon succeeded the settlements by the whites, the great Iroquois nation was only defeated by the complete destruction of its corn supply; and later, after the Revolution, when Mad Anthony Wayne was sent against the Indians of the Western Reserve, he only succeeded in his mission by cutting down and burning the thousands of acres of corn fields they had cultivated in the rich river bottoms.

The Indians, then, were not the wandering people we have been taught to believe them to have been, but were really fairly well advanced agriculturists, though they retained many of the characteristics of their former nomadic life. We now know that they practiced communal farming and lived in large villages surrounded by their extensive fields. The average per family seems to have been from two to two and one-half acres and the production of corn an average of about forty bushels per acre. And, when we consider that the soil was broken by means of wooden or stone mattocks and crude wooden spades, and that the cultivating was mostly

done by the women and children with hoes made from clam shells and the shoulder blades of the bear and moose, we are forced to realize that they were a remarkably industrious people, and that, had they known the use of metals, they would have compared most favorably in productive ability with the Europeans who came to supplant them.

The cultured methods of the Indians have been but little changed by modern agriculture, and one tool of their invention, the "husking peg," is still in use wherever corn is harvested by "armstrong" methods, a fact that the boys of the A. W. O. are likely to appreciate.

An eminent writer on agriculture gives the following agricultural achievements of the Indians:

They reproduced wild plants under control.

They propagated cultivated varieties of wild plants.

They practiced plant breeding by seed selection.

They planted seeds in hills, to give light, soil space and room for cultivation.

They used crop fertilizers, such as fish buried in the hill with the seeds.

They practiced good tillage.

They practiced clean cultivation.

They practiced multiple cropping (corn, beans, sunflowers, etc., in the same field.)

They made clearings by girdling and burning.

They invented the corn crib.

They discovered the narcotic effect of tobacco.

They cured tobacco by artificial heat.

They made syrup and sugar by evaporating sap.

They preserved fruits, etc., with syrup, wild honey, etc.

In the face of these achievements, who can doubt that the red man could have assimilated the civilization of the whites? Evidently there was no real effort on the part of the colonists, even of the hyper-religious Puritans, to find a reasonable basis on which the two races could work out a common destiny. The spirit of exploitation was rampant and the weaker, less advanced Indians went down before the superior shrewdness and unscrupulous ruthlessness of his Caucasian adversary. The history of the white man's dealings with the red man is a record of his cruelty, exploitation and dirty chicanery that bourgeois historians try hard to conceal, its last monumental infamy being the destruction of the buffalo during the seventies, by which act the Indians of the West were forced upon the reservation and reduced from **freemen** to that curious position of a "ward of the government"—"neither man nor boy; just **hobbledehoy.**"

CHAPTER III.

Agricultural periods

FIVE PERIODS mark the agricultural history of the United States since the advent of the white man. The first or Colonial period extends to the end of the Revolutionary War and records but slight technical advances in the art of agriculture. It was a period of clearing the forests, breaking the soil, and generally experimenting with crops and cultural methods. On the whole, it was a self-sufficing period; that is, the farmers derived practically their entire living from their own farms and had a small surplus to exchange for a few necessary commodities and services with the merchants and craftsmen in the village. The country, however, did export some wheat from the Middle Colonies, tobacco from all the Southern Colonies, rice and indigo from the Carolinas and Georgia, and a small quantity of cotton from the Sea Islands.

The second period, from 1783 to 1830, saw a rapid spread of the agricultural population across the mountains into the Ohio, Cumberland and Tennessee Valleys and even beyond the Mississippi to the edge of the great plains. A public land policy was adopted by the Federal Government, cotton became the dominant agricultural product of the South and made slavery a paying and therefore a characteristically Southern institution, and the

first efforts to apply science to agriculture were made. During this period, as in the first one, agriculture was practically self-sufficing, though in the South the specialization on cotton caused a considerable dependence on other regions for supplies that otherwise would have been produced at home.

In the third period, from 1830 to 1865, occurred an almost complete transformation of agriculture. The rapid rise of the factory system in the North, due to the use of steam and a flood of labor saving inventions with a consequent transfer of home industries into the shops, the invention of agricultural machinery such as the reaper, mower, thresher, etc., the extension of the railway system and the development of the prairie states caused an era of specialization which transferred agriculture into the commercial stage. Crops were now grown primarily for the market and incidentally for the use of the farmer and his family, a reversal of the former process. The new necessities of the farmer gave him a new view of his industry and in his effort to meet the new situation he turned to agricultural societies, fair associations and the scientific breeding of live stock, all of which were of wonderful assistance in the development of the country by demonstrating its resourcefulness.

The fourth period was the era of expansion into the Far West (1865-1887), and was remarkably stimulated by the Homestead Acts of 1862 and 1864, the disbanding of the Armies of the Civil War, the transformation of Southern farming due to the abolition of slavery, the invention of the twine binder and the roller process of milling flour, the exten-

sion of the railroads to the Pacific Coast, the greater extention of the interior railway systems, the development of the cattle ranches of the West after the extinction of the buffalo and the cooping up of the Indians on the reservations, and a new flood of immigration from European ports. Manufacture experienced an equal expansion at this time and more of the home industries were transferred from the farm to the factory and the shop.

The fifth period, which began in 1887, is now practically completed by the establishment of the Rural Credit or Land Bank system throughout the country. This period has been an era of agricultural reorganization. The easily available public lands were exhausted and intensive methods of cultivation came into vogue in the Eastern and Central sections with a rapid rise in land values. State and Federal schemes for irrigation and drainage were put through to increase the acreage of arable lands. Agricultural colleges were established to spread scientific cultural methods so that the food supply might keep pace with the demands of an increasing industrial population, research work in the realm of agriculture was vigorously prosecuted by numerous experiment stations under State and Federal control, and the period closes with the establishment of a separate system of finance designed to place the agricultural capitalist on a par with the commercial capitalist in the money markets of the world by modilizing and standardizing the basis of his credit.

CHAPTER IV

Colonial period

THE INCEPTION of the white man's agriculture in this country was a matter of pure imitation. Smith and his company at Jamestown were "gentlemen" who knew nothing about the cultivation of the soil, and took their first lessons from a couple of Indians that they held as prisoners. The "Pilgrim fathers" also were not originally farmers, and their cultural methods were derived from a study and imitation of the red man. Naturally, since they possessed iron spades and hoes, their labor was more efficient; yet for many years the settlers went upon the land with a farming outfit so meager that the man, accustomed to modern agriculture and its perfected machinery, is apt to gasp with astonishment and wonder how in hell they kept from starving when he learns how small it was.

Here is the list of tools supplied a Virginia settler with six persons in his family: :

Agricultural tools—5 broad hoes, 5 narrow hoes, 3 shovels, 2 spades, 2 hand bills, 2 pick axes or mattocks.

Clearing tools—5 felling axes.

House and domestic tools—2 broad axes, 2 hatchets, 2 steel saws, 2 hand saws, 1 whip saw, 2 ham-

mers, 2 augurs, 2 piercers, 3 gimlets, 6 chisels, 2 frows, 1 grindstone, nails of all sizes.

Compare the agricultural tools listed above with the tractor, pulling its gang of plows, harrow, seeder, and land packer; also the mower, combined harvester, corn binder, potato digger and threshing machine, and you have some idea of the great advance that three hundred years of effort and invention have brought to modern man. It certainly would be a "boob" that would start in to buck the modern game with a Virginia settler's outfit. It's easy to see the "water tank" where he would "hit the grit."

The Indians were communal in their method of life and usually cultivated their fields in common, and the Virginia settlers tried the communal way for a couple of years, but, finding themselves unsuited to such a mode of labor, resorted to individual ownership about 1609 or 1610.

There were three methods of acquiring land; first by purchase of a share of stock in the colonization company; second, by some act of meritorious service; and third, by "Head Right" (paying the passage of some person from England to the Colony). The share of stock cost $62.50 and entitled the holder to one hundred acres in the first subdivision and another one hundred acres in the second subdivision. Great tracts of land were secured to individuals who were able to buy a large number of shares, and much of the early trouble with the Indians arose over the efforts of these shareholders to drive the red men off these purchased holdings, the redskin not being regarded as endowed with any title, either natural or acquired.

Ministers of the church, physicians, government

officials and employers of the company were given one hundred acres each for meritorious service and could secure the second allotment by the erection of a house within three years. Any person who paid the passage of a laborer, either bond or free, to the colony, received fifty acres by "Head Right," and after 1618 this became the common method of obtaining land. As labor was in great demand, the practice became a system of investing in labor and having a piece of land thrown in to make the bargain a good one. Finally the payment to the Secretary of an amount equal to the passage money of a laborer would secure title to a tract of land and "Head Rights" passed by purchase.

Wherever there are free lands in abundance free labor is difficult to secure. The laborer can usually make as much working for himself, if he has an outfit, as anyone else is willing to pay him, and this was especially so in Virginia. Laborers came under bond to work a certain time to repay their passage money and pay for tools, seeds and provisions to make a start for themselves, and when this time was up became farmers on their own account, so there was really no paid labor in the colony worthy of mention. When a Dutch ship landed a cargo of negro slaves at Jamestown in 1619, the labor problem was practically solved for the colonists. It also solved the question of small land holdings, for we find records showing larger and larger tracts being patented every year. In 1619 the patents averaged about one hundred acres; in 1626, about one hundred and fifty acres; in 1636, about three hundred and fifty acres; in 1642, about five hundred and sixty

acres; in 1650, about six hundred and seventy-seven acres, and from 1666 to 1679 they averaged eight hundred and ninety acres. The slaves not only drove out the small landholders, but profoundly effected the economic and therefore political history of the whole country, and especially the South. And in this connection it can be shown that "cattle ranching" originated in Virginia rather than in Texas or the Far West, for the small planters, having failed in competition with their slave holding neighbors, retired to the foothills beyond the colony lands, taking their cattle with them, and in a few years had large herds grazing in the highlands, where they held annual "round ups" and marked and branded in genuine "cow-puncher" style.

Agricultural development moved slowly in Virginia, even if they did have the slaves, and in 1650 there were only one hundred and fifty plows in the whole colony, though the population was well over the fifteen thousand mark. Yet in 1631 the people were able to offer to sell corn in the Dutch settlements, and in New England tobacco was their principal export crop, and as early as 1640 they attempted to restrict the crop to 1,500,000 pounds in order to keep up the price. Cotton was well known to the Virginian, but did not assume any great importance with them until about 1750, at which time it became important to all the South, though its great commercial importance did not come about until the end of the Revolutionary War.

The raising of cattle reached large proportions in Virginia and the breeding of horses was taken up early in the history of the colony, but for a long time saddle horses were bred in preference to drafters.

Sheep, goats and swine did well and became numerous.

The colonies to the south of Virginia have about the same agricultural history, with the same system of land holding, the same labor problem, and the same general agricultural system. Cattle raising was a large industry with them. They raised wheat, tobacco, and corn, and, of the latter, exported 100,000 bushels from South Carolina alone in 1792. Forest products, such as tar, pitch, turpentine and lumber were exported from North Carolina, and on the basis of the rice and indigo exportation, Charleston became the largest and wealthiest city of the South.

Large tracts of land and a baronial style of life was the rule in the South. Small towns were unknown, the great plantations being practically self-sustaining and the "planters" conducted their commercial operations directly with England, the West Indies or the Northern colonies.

New England never was agriculturally independent. She had to rely somewhat upon other regions for a portion of her food supply, yet agriculture was always large among her economic interests.

The early New England land system was based upon the common ownership and use of a tract of land by a number of church members. The meeting house was the center of their community and only those who adhered to the faith were citizens. They allotted the citizens portions of meadow, plow lands and grazing and forest lands, together with a right to the commons which everybody used. Many Indian communal customs were adopted by them, though

the most of their customs are directly traceable to their religion.

They learned to cultivate and fertilize corn from the Indians, also beans, pumpkins, artichokes, etc., and themselves introduced wheat, rye, buckwheat and barley from the mother country. The custom of seeding worn fields to grass in order to recuperate originated in New England and seems to be the particular contribution the Puritans made to the art and science of agriculture.

The quasi communal customs of log rollings, house-raisings, husking bees and quilting parties, together with spelling matches and literary societies and singing schools seem to be typically New England productions, arising not only out of their common religious bond, but out of the economic fact that there was practically no non-land-owning laboring class. Hence co-operation in the things too heavy or too tedious for one man and his family became a custom of their communities.

In the matter of plowing, the plowman usually went about breaking up the land for his neighbor, and in some towns a bounty was paid to anyone who would buy a plow and keep it in repair so that the neighborhood plowing could be done. Their other tools were the harrow, the spade, the hoe and a clumsy wooden fork.

Cattle raising never became a large industry in New England on account of the difficulty of securing forage for beef cattle, but dairying did become important, the foundation for their herds being imported from Denmark about 1633. Little attention was paid to horse breeding, as oxen were the principal draft animals, though a breed of pacing horses

were developed in Rhode Island, but they disappeared as a distinct breed by the year 1800.

The middle colonies contained a mixed population of European peoples, with several systems of agriculture. The land tenure was similar to New England, except in New York where the Dutch feudal "Patron System" prevailed. The holdings of these patrons ran up as high as 100,000 acres and form the basis of many of the great New York estates of today. The patrons acted as local governors, securing immigrants to rent their lands at low rentals, collecting taxes and supporting the schools and churches.

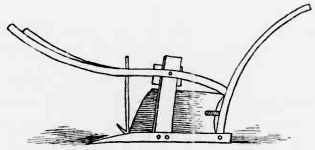
Wage labor on the farms did not exist to any extent in these colonies. Slaves and bond servants only worked for a master. Every one else had a small free hold of his own or else was a craftsman and kept his own shop in the little town.

The farming implements were practically the same as those used in New England and the South. Among the crops, wheat held the leading place and the Pennsylvania millers had a great reputation for the excellence of their flour. Cabbage, turnips, potatoes, apples, peaches, watermelons, buckwheat and corn are mentioned largely in their agricultural reports, and the Swedish traveler Kalm reports the irrigation of meadows in Pennslyvania in 1748, and the following of land to grasses, as was the practice in New England. Cattle, horses, hogs, sheep and poultry were plentiful in all these colonies, though there does not seem to have been any effort to standardize a breed or get a better stock.

Many intelligent writers have condemned the wasteful methods of colonial agriculture, but they

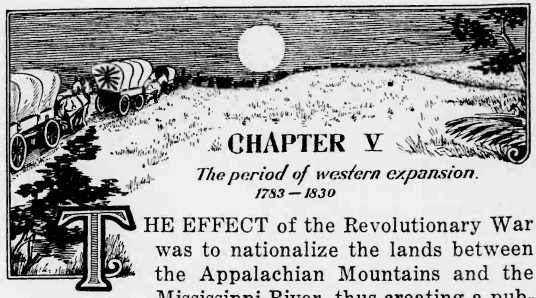
have failed to consider the fact that land was cheaper than labor and we only economize in that of which we have a scarcity. It was cheaper to plow a new and fertile field than to manure and intensely cultivate an exhausted one. The fertilizer problem was left to future generations.

Whatever may be said, the colonist met his task squarely and fairly and so well did he seek out the possibilities of the land that only one important crop (sorghum) has been introduced to our agriculture since his day.



DRAY PLOUGH

A plough used in the old days. In summer, when the ground was hard, this contrivance was very difficult to use because the point was constantly flying out of the ground. The plough was set higher or lower by means of wedges.



CHAPTER V

The period of western expansion. 1783—1830

THE EFFECT of the Revolutionary War was to nationalize the lands between the Appalachian Mountains and the Mississippi River, thus creating a public domain and laying the foundation for a national land policy. Indeed, since the relation of the people to the land is a fundamental factor in all history and the basic factor in economics, it is absolutely necessary to refer first to all the land policy and point out the methods by which a region of practically 296,000 square miles was transferred, in the course of about 130 years, into private hands.

Apparently there never was any other idea in the American mind than that the public domain should become private property as rapidly as possible. And, since the colonists were casting off all the major incumbrances of Kingly rule and feudalism, the Ordinance of 1787 is of the greatest importance, for it not only provided for republican government and made provisions against slavery, but determined the form of land tenure in the public domain. Land was to be held in "fee simple" to be freely transferred by bargain and sale, and the estates of persons dying without will were to be divided among their heirs in equal parts. This ordinance not only determined

the form of land ownership for the West, but the old states, which yet had feudal tenures, changed their forms to be in accord with it.

The only question that ever arose was, whether the transfer of land from public to private ownership should be strictly for financial benefit or should be made on social considerations; that is, whether the national treasury should be enriched or whether the settler should be primarily benefitted and the government reap its returns by the early improvement of the property and its consequent rise in taxable value. The Revolutionary War debt caused the first idea to prevail for a time, but gradually the results of such a policy became apparent and there was a change to the other view and the social motive came to predominate altogether.

There were five stages to this transition. The first from 1783 to 1800, when the land was sold for cash in tracts of six hundred and forty acres upwards, with an annual sale of about 100,000 acres. The second, from 1800 to 1820, during which quarter sections at $2 an acre on four annual payments were the minimum sales, and 15,500,000 acres were finally disposed of. The third stage, from 1820 to 1841, when forty acre tracts at $1.25 cash per acre were the minimum, and 76,000,000 acres were sold. During this period there was a genuine riot of speculation in Western lands, which induced the passage of the Pre-emption Act of 1841, and ushered in the fourth stage ending in 1862. During this stage the lands were sold in limited quantities to actual settlers at $1.25 per acre, and in the twenty-one years more than 69,000,000 acres became private property. The final stage was reached in 1862, when

the first Homestead Act became a law and the settler was granted one hundred and sixty acres on proving a period of actual residence and improvement. The operation of this law, together with the Timber Culture Act, the Desert Land Act, grants of land for educational purposes, grants to railways, canals, irrigation and drainage projects, have practically exhausted the available arable lands, and the present public domain consists of desert sections, national parks, and national forest reservations. The prospective settler must now comb the Western half of the continent for "smuggled" tracts or migrate to the mosquito infested tundra of Alaska, a region that does not yet figure in our agricultural reports to an appreciable extent.

Next to the land policy, cotton plays an important part in the national development, and due to it slavery was prolonged as an American institution. Short staple cotton had been known from the earliest settlement, for it was cultivated by the Southern Indians, but the great labor attending its preparation for the spinning wheel had made it unprofitable to grow even with slave labor. But in 1786 the long staple cotton was introduced into the South from the Sea Islands, and in 1793 Eli Whitney invented the saw gin which enabled a single man to clean 1,000 pounds of the fiber in a day. Immediately cotton was not only a commercial possibility, but became a highly profitable commodity. The invention of a remarkable series of textile machines in England, which was the home of the weaving industry, brought a great demand for the fiber, and the South, with a suitable climate, slave labor and Whitney's gin, was

in a position to supply the demand. By 1803, cotton became the leading product in the South.

As slavery had thrived on tobacco in the early days of the colonial period, it now thrived on cotton in the early days of the national existence. Undoubtedly slavery would have died a natural death but for this development of the cotton growing industry. And yet, slavery stifled the South by preventing immigration into that region. Free labor cannot exist comfortably alongside the slave, because it is called upon to help bear the stigma that is cast upon labor by the fact of slavery.

Slavery also contributed to continue the custom of "land killing" so common to the Americans—that is, the cropping of a field until it is exhausted and then moving on to a new one; it increased the tendency away from small farms to great plantations, and prevented the early adoption of more efficient tools and methods because the slave could not be trusted to use them.

The **spread** of the cotton industry was the only change the agricultural South experienced during this period. Tobacco spread Westward into Kentucky and Tennessee and the cattle industry thrived in the same region. Virginia and Kentucky began the breeding of mules from a stock of jacks that had been sent to this country from France and Spain by Lafayette and the King of Spain as presents to General Washington.

If slavery stopped the gap to immigration in the South, there was no such obstacle in the North, and from 1785 until almost the close of the nineteenth century the great exodus of the peoples poured Westward—the most wonderful and inspiring fact in all

American history. The great land hunger of the race was being fed, the wilderness being peopled, the promised land entered, Caucasian destiny fulfilled. As a child, I stood with my father at the gate of our farm in Illinois and saw the later tide of this great migration pouring onwards toward the West. He had come from Poland on the crest of an earlier flood of immigrants and could appreciate the wonderful significance of their endless wagons, the trudging pilgrims, the worn and weary livestock. From him I caught an understanding and an inspiration that more than forty years have not been able to efface.

The American "settler" with his ax, the most energetic and destructive agent the world has ever seen, leveled the great forest which stretched continuously from the Atlantic Coast to the end of Lake Erie on the North and far beyond the Mississippi River on the South. A genius of the lamp! At his call whole states have risen over night! And yet, during the period of this expansion there were comparatively few changes in the general character of agriculture. Some significant beginnings were commencing to appear, prophetic of the changes that later would occur. In 1797, Charles Newbold invented the cast iron plow, but the farmers said it poisoned the soil, and wouldn't use it. Jethro Wood also took out patents on cast plows and was the first man to seek a mouldboard that would give the least resistance.

Societies for the improvement of agriculture began to form in this period and an intelligent importation of improved breeds of livestock from Europe got under good headway.

In 1783, Ringgold, Groff and Patton of Baltimore began the importation of Shorthorn and Hereford

cattle from England. The first bull of their importation was sent to Kentucky in 1785, and in 1817 Colonel Sanders of that State sent to England for twelve head of the best stock that could be bought. Shorthorns were introduced into New York in 1792 and into Massachusetts in 1818. Henry Clay imported Herefords in 1817. Others followed a little later.

In horse breeding, the famous "Messenger," father of the American trotting horse, was brought to Philadelphia from England in 1788, and Justin Morgan (son of True Briton, an imported British horse), was foaled in Massachusetts in 1793, and became the progenitor of the celebrated breed of all-purpose horses known as the "Morgan horses."

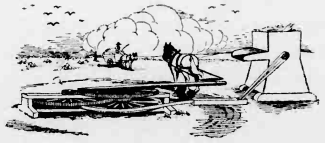
The first merino sheep were imported in 1793 and, later, when the Napoleonic wars disrupted a great part of European industry and agriculture, sheep raising became an important industry. There were 5,000 imported merinos in the country by 1809, and in 1813 wool sold at from $2 to $3 a pound.

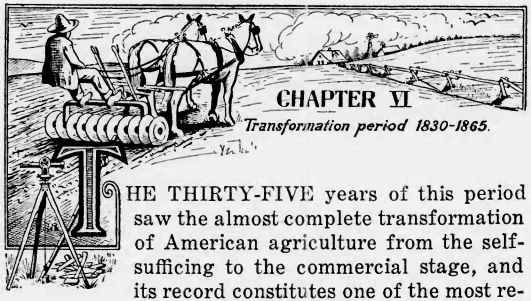
Hogs multiplied in the frontier settlements and came into greater demand for food as the game was killed off, thus stimulating the production of corn and a greater clearing away of the forests. Cincinnati became an extensive pork packing center and traded, not only with the East, but, after the invention of the steamboat, had extensive commercial relations with Ohio and Mississippi River points as far as New Orleans.

During all this period the people were especially well fed; their energetic stirring of the fertile soil produced an abundance; but opportunity for exchange were severely limited by the lack of transportation. In Western Pennsylvania the farmers turned their corn into a paying crop of whisky and the "Whisky Insurrection" came as the result of a tax laid on their enterprise which took all its profit away. The Ohio Valley used the river as an outlet and traded largely with the South, which grew cotton and had the money to pay for pork and corn.

The opening of the Erie Canal in 1825 made a great change in the agricultural world. The tide of immigration swung Northward and following the line of the Canal and the Great Lakes, settled North Ohio, Indiana, Michigan and Illinois. Wheat was easier to raise in these Northern latitudes and, as it stood transportation better than corn, became the money crop of that region. The traffic generated by this new avenue of transportation flowing through New York City, caused that place to advance ahead of Baltimore and Philadelphia and become the leading city of the country.

On the whole it was a splendid period, when every white man was his own master, and the conquest of the wilderness developed qualities that, though they may become perverted, must ever compel our admiration.





CHAPTER VI

Transformation period 1830-1865.

THE THIRTY-FIVE years of this period saw the almost complete transformation of American agriculture from the self-sufficing to the commercial stage, and its record constitutes one of the most remarkable chapters in the economic history of the world.

European agriculture had taken up the breeding of better livestock, improved cultural methods, systems of crop rotation, the growing and feeding of roots, and the use of commercial fertilizers; but, aside from the better livestock, these matters had received but little attention in this country. Agricultural tools had been slightly improved on both sides of the Atlantic, and we have seen the inception of the modern plow but, beyond this, it may be said that prior to 1830 there was not an agricultural **machine** in common use anywhere in the world.

At the beginning of this period all farm work except plowing, harrowing and carting, was done strictly with hand tools. Agriculture was practically the same as it had been for two thousand years before. Grain was sown broadcast, and harrowed in with a wooden tooth drag or a tree top drawn by oxen. The reaping was done with a cradle and the threshing accomplished with a flail or by driving

horses and cattle over the shearer upon a threshing floor. Hay was mown with scythe, and raked and pitched by hand. Corn was planted by hand, and covered and cultivated with a hoe.

Within thirty-five years, in the settled regions and near the avenues of transportation, machinery had displaced the hand tools. Grain was planted largely with the drill, reaped with a machine, and threshed with machinery. Hay was mowed by a machine, raked with a horse-rake, and stacked or lifted into the mow by horse-power. Corn was planted and cultivated by horse-power. The farmers mode of work was completely changed.

The idea of power—horse power—had seized upon the human mind and must be wrought out to its logical conclusion. The plow, the harrow and the cart had been the only implements calling for other than human power, and the slow moving but relatively economical ox had furnished a satisfactory motive force. But when the machines came in with their mechanical ability to perform faster than the ox could travel, the faster moving, more amenable horse and mule came into general use. The **horse-power** idea came to dominate American agriculture and lifted its production capacity beyond that of any other country in the world.

The influence of the use of machinery was to induce a specialization in crops—the growing of "money crops"—and the purchase of such products as were needed to complete the living on the farm. Home industry after home industry was transferred to the city shops and factories and the farmer limited his efforts to supplying some particular demand.

The self-sufficing age went out; the commercial age came in.

Prior to 1830 the South had specialized in cotton, as we have seen before, but the adoption of machinery did not extend into that region. The old hand methods continued on, though the production of cotton was six times greater in 1860 than it was in 1830. This increase was due almost wholly to natural increase for, though immigrants poured into the country by hundreds of thousands, they avoided the South on account of slavery and in 1860 there were only eleven cities of more than 800 population in that whole region.

The near Southern states of Virginia, Maryland, Kentucky and Missouri engaged largely in the growing of tobacco, a crop the slaves were well adapted to cultivate; but, after all, the negro was not kept to grow the crop; the crop was grown as an excuse for breeding the negro. In 1836 a field hand was worth $600; in 1849 he sold up to $1,000, and in 1860 the prime "nigger" brought $1,400 in the Southwest.

A determining factor in the transformation period was the building of the railroads. There were no roads in operation in 1830, but by 1860 there were 30,000 miles of line, extending into all the territory east of the Missouri River. Fifty thousand miles of telegraph lines were erected between 1844 and 1860, and in 1850 letter postage was three cents for distances under 3,000 miles. The isolation of the colonial and pioneer periods was broken. The markets of the world were nearer and ideas found more room in which to spread.

The European situation also helped the transformation in America. The development of England's manufacturing industries caused a greater demand for foodstuffs and raw materials and induced the repeal of her corn laws. The great Irish potato famine, the rebellions in Continental Europe and the Crimean War increased European dependence upon the United States for food supplies.

At the same time the Eastern states were rapidly developing the manufacturing industries and using a larger food supply. The Pre-emption Law of 1841 stimulated immigration and furnished an easy means for the political refugees from Europe to obtain homes. The immigration from 1840 to 1850 was almost three times as great as in the previous ten years, and the twenty year period, from 1840 to 1860, added more than 4,300,000 immigrants to the population.

By far the most important factor in this transformation was the invention of farm machinery. Manning patented the mowing machine in 1831. Hussey patented a grain reaper in 1833, and McCormick patented a similar machine in 1834. Threshers came into use sometime in the thirties and were combined with the fanning mill before 1850. John Deere made the first steel plow in 1837. The corn planter and the two-horse cultivator came into use during this period, and by 1860 portable steam engines were being used to run the threshers.

The invention of the reaper was one of the greatest events in the history of modern industry and is really deserving of a chapter by itself. Yet it is doubtful if it effected a greater saving in labor than did the corn planter and cultivator when it is considered that corn is our principal crop.

The idea of horse-power not only brought about the invention of labor-saving machines, but it induced the importation and breeding of better, more dependable horses. The Morgan, all-purpose horse, has been mentioned, but it was the importation of the two Percheron horses, Louis Napoleon and Normandy, in 1851, that gave the breeding of draft animals a generous boost in this country. The thoroughbred stallion, Denmark, brought to Kentucky in 1839, became the founder of the breed of American saddle horses.

Hogs continued to multiply with the increase in corn production, the center of hog breeding moving Westward with the corn center and, after 1861, Chicago became the center of the pork-packing industry.

Sheep did not make any proportionate increase during the period, but cattle increased, especially in the West. There was a systematic effort to improve the breeds and the breeding of Shorthorns received a great impulse in 1834 by the organization of the Ohio Company for Importing English Cattle, and before the close of the period some famous bulls brought as high as $5,000 per head.

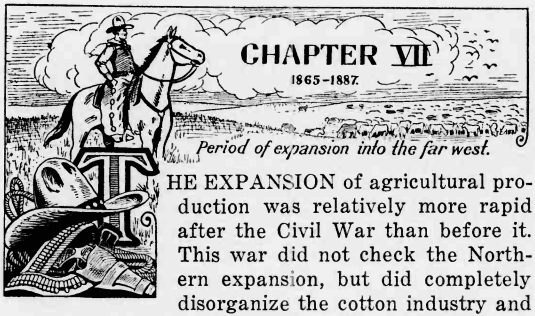
The settlement of the prairie states caused a considerable decline of agriculture in the East, especially in New England, and by 1840 there was a strong movement of farmers out of that section. General farming in competition with the West was no longer possible but in suitable locations, dairying and market gardening were especially profitable and a movement for the importation of dairy cattle became quite strong. In 1853 there were seventy-five

pure bred Jerseys in Massachusetts, also a number of Ayrshires.

Up to 1850 all the butter and cheese of the country was made on the farms, but after that year the cheese factory came into existence, with a consequent standardizing of the product and a very large increase of the business.

The farmers commenced to study farming during this period and the fairs and agricultural societies that had been formed in the previous period were greatly increased and extended. By 1860, every state held an annual agricultural exhibition, and practically every county had its fair. These annual gatherings were not only distinguished for their horse racing and "fist and skull" pugilism, but furnished splendid opportunity for the view of new agricultural machinery, livestock and farm products, and had a powerful influence in stimulating improvements and spreading agricultural knowledge.

A wonderful period! A period in which the annual corn crop increased to almost one billlion bushels, and wheat and oats were each above the 170 million bushel mark. In 1860, almost 21 million dollars' worth of agricultural implements were sold to the American farmers. The old, hard method of farming was due for the discard, and along with the new farmer and his vision of agricultural conquest came the farm hand. The Civil War closed this period and the whole country faced a readjustment of its ideas to suit the fact that the industrializing process was invading every avenue by which the people lived.



THE EXPANSION of agricultural production was relatively more rapid after the Civil War than before it. This war did not check the Northern expansion, but did completely disorganize the cotton industry and involve it in temporary ruin. The improved machinery (reapers, threshers, corn planters, cultivators, etc.), enabled the North to increase its production, though a large portion of its labor force was diverted into the army.

Women and children fed the North, their labor being rendered more efficient by the use of the machines. In 1865 there were 250,000 reapers in use in the Northern states. From 1859 to 1863, the wheat crop of Indiana alone increased from 15,000,000 to 20,000,000 bushels, though 10 per cent of her male population was in the army on the latter date.

Part of the drain on the labor force of the North occasioned by the war was made good by immigration, the immigration from 1860 to 1870 being nearly as great as from 1850 to 1860. Practically all these immigrants settled in the Northern states, and 42 per cent of them settled in the group of states which lie north of the Ohio River, west of New York and east

of the Missouri River, the number going to the real South being practically negligible.

In the following years the immigration was almost 3,000,000 persons—a population equal to that of the Colonies at the time of the Revolution—and these settlers added 297,000 square miles of cultivated fields to the farm lands of the country—an area equal to that of Great Britain and France combined. From 1880 to 1890 the immigration was 5,250,000, many of whom found their way onto the Western farms.

While this great migratory movement was going forward the mining, transportation and manufacturing industries were being developed to keep pace with the growing needs of the increasing population. In the field of agricultural machinery there was a great expansion and the census figures are extremely interesting. Farm machinery produced in the census years was as follows:

1860	$21,000,000
1870	42,500,000
1880	68,500,000
1890	81,250,000

And during this same period the census returns show the grain crops to have been as follows:

1859—Corn	889,000,000	bushels
Wheat	173,000,000	"
Oats	172,600,000	"
1869—Corn	761,000,000	"
Wheat	288,000,000	"
Oats	282,000,000	"
1879—Corn	1,122,000,000	"
Wheat	459,500,000	"
Oats	407,800,000	"

1889—Corn	2,122,000,000	"
Wheat	468,300,000	"
Oats	809,200,000	"

Also during this period the export of breadstuffs was very significant of the agricultural advance, and by 1880 the United States had become the greatest exporter of wheat in the world.

The "Homestead" Law of 1862 was a great factor in the Westward expansion and the growth of agricultural enterprise. Practically free land encouraged the settlement of the public domain. The ease with which ex-soldiers could get land helped to prevent a glut of the labor market. The sale of army horses and mules to farmers helped to expand agriculture and it may be said that the close of the war marks the time when the ox, as a draft animal, was finally displaced by the horse.

This rapid settlement and cultivation of the land (very often on a purely speculative basis), brought a glut of agricultural commodities on the market. (Note the almost doubling of the cereal crops between 1869 and 1879.) Foreign countries were not able to take up the surplus, which resulted in an era of very low prices and the panic of 1877.

The rural discontent generated by this period of dislocation gave rise to the Grange and other farmer movements, which sought to readjust the environment by means of rural co-operation of all kinds.

A great expansion of the railway systems occurred in this period. Steel rails were substituted for iron rails; trunk line systems were organized; feeder lines or "Granger roads" were built in all directions, and the transcontinental lines were pushed through

to the Pacific Coast, thus enabling the Western farmer to compete in the markets of the East.

Along with other improvements came the refrigeration car (1869), which permitted the transportation of meat at all seasons of the year and, by extending the refrigerating system to the ships, fresh meat was exported to Europe in 1876. Also, a system of grading and classifying grain was adopted, which allowed the handling of vast quantities in bulk and promoted the building of elevators both at interior points and on the lakes and seaboard, thus helping to decrease shipping costs and open up the world's markets to the American farmers.

The amount of grain that can be economically grown in any section is limited by the amount that can be harvested, and it was the invention of the twine binders by Appleby that enabled the production of grain to expand to its present magnitude.

Its consequences were quite as important as those that followed the invention of the reaper. The per capita production of wheat increased from 5.6 bushels in 1860 to 9.2 bushels in 1880.

Miller's improvement of the threshing machine and the use of the steam engine also helped in the expansion of the grain industry.

The invention of the roller process of making flour enabled the production of a better grade from spring wheat than had before been made from winter wheat. This immediately made the further North available as a wheat growing region, and Minnesota and the two Dakotas more than doubled their population in the ten years from 1870 to 1880. Further, the center of flour production moved at one jump from Rochester, New York, to Minneapolis, Minnesota.

The check rowing corn planter cut the labor of planting corn in half and enabled crass cultivation of the crop, and a greater production in consequence. In the semi-arid region the lister was adopted for corn planting and, by getting the corn deep, assured moisture for the plant and an almost certain crop. Other tools were devised to lighten the labor of cultivation, with a corresponding increase of the production per man. The corn harvesting machinery came later, owning to the fact that the corn can safely be left in the field until late in the year. Much of it is still gathered by hand with the husking peg, just as the Indians did it over 300 years ago.

Figures prepared by Mr. H. W. Quaintance of the Department of Agriculture, and based on the production of the staple food and forage crops, show that the efficiency of the farmer, through the use of improved machinery, increased during this period some 500 per cent over his efficiency in the previous period.

We have seen that cattle ranching began in the foothills of Virginia soon after the introduction of negro slavery. But, due to the wooded character of the country and the lack, both of demand and of transportation, had never developed to the point of being a distinct branch of agriculture.

However, the Westward march of the peoples and the gradual pushing back of the Indians opened the "plains" for settlement, and the grazing of cattle began to assume definite proportions as a distinct industry in the vast region. Western Texas was a great feeding ground where the buffalo and wild Spanish cattle roamed side by side and the pioneers were not slow to realize the possibilities of these natural pastures.

In 1857 the "cattle trail" was broken, a herd being driven "on grass" from Texas to Illinois—a truly remarkable performance. But the Civil War cut off the outlet for these cattle and they were left to multiply, awaiting the day of peace.

Then it was discovered that the grass of the Northern plains was as nutritious as that of Texas, and cattle could live outside all winter—could rustle forage. It was also discovered that Southern cattle gained more weight if driven North at 3 or 4 years of age, and the beef was of a superior quality. Immediately the plains, both North and South, must be made safe for the cattle business. The buffalo must be killed off and the Indians be confined on reservations. This task was complete about 1870, and the "trailing" of cattle from the breeding grounds in Texas to the fattening grounds in the North became an institution in Western life.

In 1871, 600,000 head of stock came over the trail from Texas. The sixteen years from 1869 to 1884, inclusive, show almost 5,000,000 head driven Northland—an average of more than 305,000 per year.

So vast a movement in a single industry must have its social reflexes, and we see the development of the "cow towns"—Newton, Abilene, Great Bend, Ellsworth, Dodge City, Hayes City and Ogallala—with a life as colorful and exciting as that furnished by any bonanza, handled 400,000 cattle in the year 1884.

After 1884 the trail declined because the railways began to penetrate to the heart of the cattle country. The corn fields were being pushed Westward and the winter feeding of cattle developed to link the pastures with the farms. The refrigeration of meat and shipment of frozen carcasses to Europe in 1876

was rapidly developing the packing industry. Kansas City, St. Joseph, Omaha, Sioux City, St. Louis and Chicago became great slaughtering centers.

In connection with the cattle-feeding industry the raising of hogs became a by-product, as the hogs could be fattened on the droppings and wasteage of the cattle.

We have seen the beginning of the dairy industry in the Colonial period and the subsequent effort to improve the breeds of dairy cattle. Butter making was practically confined to the supply of various local demands and the surplus of milk was converted into cheese, but the refrigeration system began to open up the possibilities of the butter market and the invention of the mechanical creameries in 1880 caused a revolution in the industry.

The commercial butter making center was at first in Orange County, New York, but the Babcock butter fat test, the centrifugal cream separator, and the bacteria method of "ripening" cream so developed the business that the center of manufacture moved Westward to Elgin, Illinois. The Americans are not great cheese eaters, and the foreign markets have special tastes in this regard, hence cheese making naturally declined and, on the strength of the national demand, butter making supplanted it.

The Civil War produced a violent agricultural change in the South. The emancipation of the slaves and the bankruptcy of the Southern planters required a reorganization of the cotton industry. This reorganization was encouraged by the high prices for cotton on the English market, which reached 43 cents per bushel in 1865.

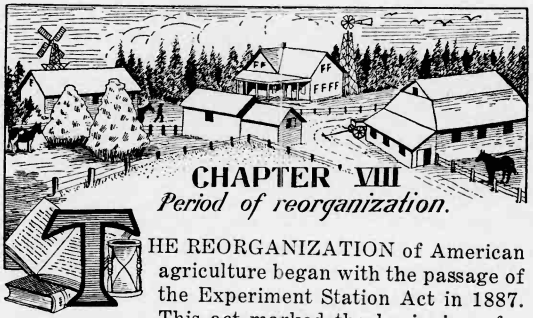
But the reorganization was not a judicious one

and fostered such an over production that the prices tumbled and many of the planters were involved in ruin. This tended to break up the big plantations, and many of them were cut up into small farms. It also encouraged the "tenant" system and "on the shares" farming, which in many sections degenerated into peonage—virtually a disguised form of agricultural slavery.

By 1879 the cotton industry had revived and the production of that year exceeded the production of 1860. Also, there was considerable diversification, the small farmers planting part of their land to corn and potatoes, raising gardens, keeping chickens and hogs, and milking a cow or two. This diversification met the bitter opposition of the merchant class of the South, who furnished the farmers with supplies on credit. They wanted a **money** crop—cotton—for by this means they derived a double profit and kept the agricultural class in economic subjection through the machinery of a vicious credit system.

The noise of this conflict still re-echoes throughout the South, its active manifestation in recent years being the formation of the Farmers' Union, which has acquired a large membership in every Southern state.

The twenty-two years of this period was one of the greatest in American history—a period of rapid growth in population, vast development in industrial enterprise, and enormous expansion of cultivated area. The American people were achieving unity and preparing for the conquest of the markets of the world.



CHAPTER VIII

Period of reorganization.

THE REORGANIZATION of American agriculture began with the passage of the Experiment Station Act in 1887. This act marked the beginning of a comprehensive and systematic application of experimental science to agriculture and was the signal for great activity in research work in all lines of agricultural endeavor. The Experiment Stations are really the foundation of the new agriculture.

As we have seen, the steady stream of settlers and homesteaders pouring Westward had populated the desirable lands and made it profitable to push the railways entirely across the continent. Great interest was developed in the irrigation of the arid regions and the drainage of the swampy sections, and **intensive** agriculture began to be preached. It was recognized that agriculture expands quite as readily by better cultural methods and a greater production per acre as it does by placing more land under cultivation. In fact, since the free lands were now occupied, the price of land generally was greatly advanced and only an intensive cultivation would pay dividends upon the investment now demanded.

The old days of cheap land and dear labor had

passed and the inefficiency and waste of the old farming must go with them. The avenue of escape from wage labor was being definitely closed, the era of tenantry and wage farming was coming in—an era of dear land and cheap labor—and it began to pay better to raise 100 bushels of corn on an acre than to raise 100 bushels on four acres, as had been done before.

The higher land becomes and the cheaper labor becomes in relation to it, the more intense will the cultural methods become. In other words, the farmer will adopt the method that gives the best returns on the sum of the interest, maintenance and labor charges.

The demand for better agricultural methods was met by the Experiment Stations and the demand for more land was met with great schemes for irrigation and drainage. The Carey Irrigation Act was passed in 1894, granting arid lands to the states for irrigation development purposes.

This was followed in 1902 by the National Reclamation Act, under which the greatest of the irrigation projects have been constructed. Fifteen million acres were granted to the states under the Carey Act, and more than 2,000,000 acres reclaimed under the Act of 1902.

In the East the various states along the Atlantic seaboard took up the matter of the drainage of the great succession of swamps and marshes that extend from New Jersey to the Everglades of Florida and contain about 80,000,000 acres of land. Untouched they were not only valueless but disease breeding—the home of malaria and the yellow fever spreading mosquito. Reclaimed, they might easily support a

population of 10,000,000, adding vastly to the food supply of an increasing population.

During this period a desperate warfare was carried on in the semi-arid region of the West between the cattle men and the homesteaders on "Nesters." The Campbell system of dry farming made it possible to extend the cultivated area to the very edge of the arid region and thereby restrict the open range. The "Nesters" finally prevailed and ranching materially declined. The old free life of the plains and the romance of the "trail" passed into the realm of song and story.

The general farmer is now taking the place of the range men as the breeder and feeder of cattle. Better methods are producing more and better cattle and, despite the trustification of the slaughtering business by the packing interests, the raising and finishing of "block" cattle is a most attractive side of modern farming.

It is also interesting to note that the general farming situation has resulted in a revival of cattle raising in the mountainous sections of the East, from Maine to Georgia.

This period has also seen the development of Agricultural Colleges in all the states, the spread of agricultural knowledge by means of the Farmers' Institutes, and field demonstrations, and the quasi-government direction of rural activity by means of County Agricultural Agents sent out by the Department of Agriculture. Indeed, so great is the progress of farming on the scientific side that it seems likely to enter the ranks of the learned and dignified professions.

At least, scientific research and methods have finally brought the art of agriculture to a paying basis and the up-to-date farmer, equipped with a scientific education and technical training steps forward very much in advance of the so-called business men and intellectuals of the rural towns.

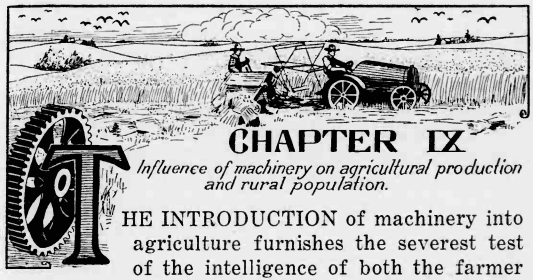
This period, just now closing, is really too near to us to properly evaluate its material achievements. Socially, it has been a period of concentration; the open spaces have been populated and the dissimilar elements of the people so pressed together as to produce crystalization—the American type is commencing to appear. Economically the line of cleavage between the farmer and the farm laborer has widened into a gulf, across which they glare at each other in uncompromising hostility. Also, the question of agricultural finance as opposed to commercial finance has come up for a final solution. The borrowing farmers have forced upon the statute books the Rural Credit Act, hoping thereby to achieve financial equality between the agricultural and other industrial interests, but these hopes are illusory.

With the great increase in farm values caused by the inflation due to the war, the expectations of the tenant class to become land-owners through the Rural Credit Banks are doomed to disappointment. Instead of creating an era of small farms, the tendency is for the big farmer to finance further purchases of land through the credit banks, and these are a decided tendency towards concentration. The "Land Trust" is well upon the way.

The universal application of machinery to agriculture has definitely industrialized farming and created three distinct classes in the rural regions—the

farmers, the tenants, and the laborers. Unionism has finally penetrated to this latter group and for the past five years their Industrial Union has been steadily growing until it has become a factor in the agricultural situation in all the Trans-Mississippi region and on the Pacific Coast. Not only have the laborers organized and improved their conditions, but in the grain growing states they have produced a political revolution—the formation of the NON-Partisan League being directly traceable to the pressure exerted from below by the Agricultural Workers' Industrial Union No. 400, of the Industrial Workers of the World.

"100% American."



CHAPTER IX

Influence of machinery on agricultural production and rural population.

THE INTRODUCTION of machinery into agriculture furnishes the severest test of the intelligence of both the farmer and the farm laborer, and the extent to which it may be introduced depends upon a number of factors which vary considerably in the different regions of the Earth. However, in the United States the conditions were favorable to the change, except in the South, which was cursed with slavery, and a consequent lack of intelligence on the part of the major portion of the population.

In the North there was a population eager to advance, and as fast as the machines could be demonstrated they were adopted. It was so rapidly developing a region that but few rural traditions had taken root; there were no deep-seated prejudices that needed to be overcome. Most of the farmers were land-owners, the proportion of tenants was small, and the number of wage-earning farm hands very limited, so there were practically none to oppose the change because they felt their mode of living threatened.

The early machines were fairly simple in construction and required but little imagination to be able to grasp their general principles. Hence, the

new farming came into use without the friction that developed in Europe where the lands were long settled and where there were well defined classes of landlords, tenants and laborers with strongly developed class psychologies and ancient prejudices.

We have already discussed the history of agriculture in this country and have fairly well traced the advance of the machines in the transformation of the art, but it is now necessary to invade the realm of dry figures and show the concrete result of machine farming in the direction of increased production which, of course, is the true test of utility and beneficence.

The Federal census of 1840 was the first to take any account of agricultural production and, as the machine age was in its infancy at that time (none of the machines having been adopted to the extent that they materially affected the total of production), we may very justly use the figures of that census as the basis of our comparisons.

The following tables have been made as brief as clearness will allow and will repay a careful study. Round numbers and percentages are given rather than burden the reader with the niceties of the statisticians. The ten year periods are used as being ample for comparison. The 1919 figures are approximations, and all figures refer to the United States proper.

See Page 62 (Table A).

Table A comprises the working farm population with the total population by ten year periods from 1840 to 1919. During these 79 years the working farmers decreased from 20 per cent to 13 per cent of the total population, a relative decrease of 35 per

cent. While the total population had increased practically six and one-third times, and the export of foodstuffs to foreign lands had also vastly increased, relatively speaking, less than two-thirds the number of farmers was necessary to supply the demand in 1919, as compared with 1840. Without doubt, this is due to the introduction of machinery on the farms.

It increased the capital necessary to enter into the new competitive farming and compelled vast numbers to seek employment in the developing industries who would otherwise have sought a living on the soil. This fact is amply illustrated by a glance at Table B, which shows the relative increase of the industrial population as compared with the total population for the same period.

See Page 63 (Table B).

The industrial population increased from 13 1-3 per cent in 1840 to 31.1 per cent of the total population in 1919, a relative increase of more than 2 1-3 times in 79 years, but also an actual increase of 14.8 times as compared with an actual increase of 4 1-9 times on the part of the working farmers (see Table D). The machine method of wealth production limited the opportunity of the ordinary man to compete on account of his lack of capital and he sought his outlet in the shops where, as a man without capital, he was at least able to earn a living.

See Page 64 (Table C).

Nowhere can the effects of the machines be more clearly shown than in the figures supplied by the census on the production of the cereals. (Grain) Table C gives the production of wheat, oats, corn, rye, barley, rice, buckwheat and Kaffir corn for the census years from 1840 to 1919. This, of course, gives but

TABLE A.

Showing Relative DECREASE of Working Farm Population as Compared With Total Population

Census Year	Total Population	Working Population on Farms	Percentage of Working Farmers to Population	Relative decrease of Working Farmers in Ten Year Period
1840	17,069,000	3,413,800	20%	12%
	Increase, 35.9%	Increase, 19.56%		
1850	23,192,000	4,081,800	17.6%	85%
	Increase, 35.6%	Increase, 24%		
1860	31,443,000	5,062,300	16.1%	4.35%
	Increase, 22.6%	Increase, 17.5%		
1870	38,558,000	5,948,000	15.4%	None
	Increase, 30%	Increase, 29.7%		
1880	50,156,000	7,714,000	15.4%	11.4%
	Increase, 24.8%	Increase, 10.9%		
1890	62,622,000	8,556,000	13.7%	None
	Increase, 20.7%	Increase, 21.3%		
1900	75,568,000	10,382,000	13.7%	22%
	Increase, 21.7%	Increase, 18.3%		
1910	91,972,000	12,285,000	13.4%	3%
	Increase, 17.5%	Increase, 14.36%		
1919*	108,067,000	14,049,000	13%	

*Approximate

TABLE B.

Showing Relative INCREASE of Industrial Population as Compared With Total Population

Census Year	Total Population	Working Population in the Other Industries	Percentage of Workers in Other Industries	Relative Increase of Industrial Workers in Ten Year Period
1840	17,069,000	2,275,900	13 1-3%	17.7%
	Increase, 35.9%	Increase, 60%		
1850	23,192,000	3,641,100	15.7%	9.5%
	Increase, 35.6%	Increase, 48.8%		
1860	31,443,000	5,418,700	17.2%	Sl't dec.
	Increase, 22.6%	Increase, 20.9%		
1870	38,558,000	6,552,000	17%	13.7%
	Increase, 30%	Increase, 48%		
1880	50,156,000	9,699,000	19 1-3%	17%
	Increase, 24.8%	Increase, 45.9%		
1890	62,622,000	14,155,000	22.6%	9.3%
	Increase, 20.7%	Increase, 32.1%		
1900	75,568,000	18,699,000	24.7%	13.75%
	Increase, 21.7%	Increase, 38%		
1910	91,972,000	25,883,000	28.1%	10.67%
	Increase, 17.5%	Increase, 30%		
1919*	108,067,000	33,648,000	31.1%	

*Approximate

TABLE C.

Showing Relative Increase of Productive Capacity for Working Farmer by Ten Year Periods

Census Year	Working Population on the Farms	Total Cereal Production in Bushels of Corn, Oats, Rye, Wheat, Rice, Barley, Buckwheat and Kaffir Corn	Bushels of Cereal Production Per Working Farmer	Relative Increase of Productive Capacity per Working Farmer for Ten Year Period
1840	3,413,800	617,300,000	188	13.51%
	Increase, 19.56%	Increase, 41.1%		
1850	4,081,800	871,000,000	213.4	15%
	Increase, 24%	Increase, 54.1%		
1860	5,062,300	1,242,100,000	245.4	04.11%
	Increase, 17.5%	Increase, 22.34%		
1870	5,948,000	1,519,600,000	255.5	36.98%
	Increase, 29.7%	Increase, 77.64%		
1880	7,714,000	2,699,400,000	350	17.54%
	Increase, 10.9%	Increase, 30.43%		
1890	8,556,000	3,520,900,000	411.5	03.77%
	Increase, 21.3%	Increase, 25.95%		
1900	10,382,000	4,434,700,000	427	00.56%
	Increase, 18.3%	Increase, 18.95%		
1910	12,285,000	5,275,400,000	429.4	00.605%
	Increase, 14.36%	Increase, 15%		
1919*	14,049,000	6,066,700,000	432	

*Approximate

TABLE D.

Table of Comparison With Population and Production of 1840 by Ten Year Periods

	Total Population Compared to 1840. See Table A.	Total Working Farmers Compared to 1840. See Table A.	Total Industrial Workers Compared to 1840. See Table B.	Total Cereal Production to 1840. See Table C.	Rates of Increase of Cereal Production Compared to Increase of Farming Population.	Bushels of Grain Produced per Capita of Population.
1840	1.	1.	1.	1.	.....	36.
1850	1.36	1.195	1.6	1.411	118%	37.5
1860	1.842	1.483	2.38	2.012	135.7%	39.4
1870	2.259	1.742	2.90	2.462	141.3%	39.4
1880	2.938	2.26	4.26	4.373	193.5%	54.
1890	3.669	2.506	6.22	5.704	227.6%	56.2
1900	4.427	3.042	8.216	7.184	236.1%	58.7
1910	5.388	3.60	11.37	8.546	237.4%	57.3
1919	6.331	4.115	14.80	9.828	238.8%	56.

one phase of farming, but is enough to indicate the great increase in productivity as the machines were gradually introduced. In 1840 the working farmer produced 188 bushels of all kinds of grain, while in 1919, he produced 432 bushels of all kinds of grain, an increase of 238.8 per cent (see Table D). Table C is faulty in the respect that it refers the cereal production to the total number of farmers. That would be well enough for 1840, but in 1919 and for many years past, there has been specialization in farming and a large percentage do not produce any grain whatsoever, which means that the efficiency of the grain farmer is really much greater than the table indicates. Quaintance, for instance, places the individual increase of barley production per farmer in 1910 at thirty times the production of 1840.

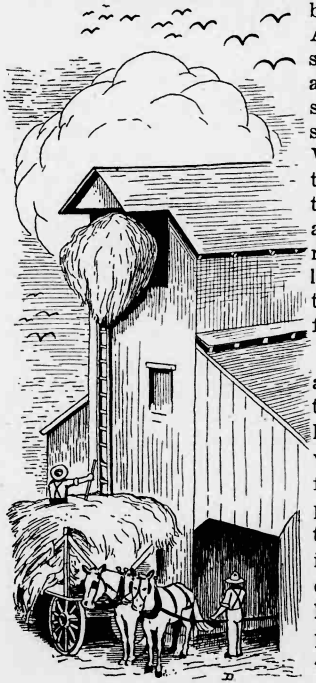
See Page 65 (Table D).

It is interesting to observe that while our population has increased 6 1-3 times, and the industrial population has increased 14.8 times, the working farmers have increased but 4 1-9 times. While the farmers have increased 4 1-9 times, their cereal production has increased 9.8 times and the grain production per capita of total population increased from 36 bushels in 1840 to 56 bushels in 1919.

For years we have had dinned in our ears the cry of "Back to the land! Back to the land!" The impression sought to be conveyed being that our countryside was becoming depopulated. But the fact of the matter is that there has been **no** movement **away** from the land. The agricultural population has steadily increased, as Table A amply shows. But it has not increased at anything like the rate of the industrial population. The decrease of the number

of working farmers is relative, not real. The number of land owners, however, shows a decided tendency to actually decrease, and this will be discussed in the next chapter.

Dr. Mathews figured that the world would soon reach the limit of its capacity to feed the population, but the progress of American agriculture sets all his predictions aside. Machinery and scientific farming solve the problem. When 13 per cent of the people can feed the entire population and export almost as much more to foreign lands, there is no need to worry over the food supply.



Even in Great Britain, Prof. Marshall of the University of Dublin estimates that, with a proper store of fertilizers, the British people would be able to withstand an indefinite blockade, machinery and science having settled the problem of food supply.

CHAPTER X

Development of Agricultural Proletariat

IN THE preceding chapters we have traced the devolopment of American agriculture and the effect of machinery both upon production and rural population. In the present chapter we will attempt to show the development of a distinctly proletarian class upon the farms.

The American census reports are utterly unreliable for the period prior to 1850, for the reason that they were entirely general in their character and failed to gather that particular information which would give an exact view of the condition of the rural population. The authorities are completely at sea as to many phases of the agricultural problem and hold divergent opinions regarding the same, thus making one man's idea quite as reliable as the other's and all of them open to question.

Only in the South, where the negro slaves constituted the laboring population, was there specialization in agriculture (in the cotton and tobacco raising industries). In the Middle States and in the North where general farming was practised, there was no genuinely rural proletariat, for the reason that the lands were cheap and the undeveloped West

was open to every man who had sufficient knowledge of agriculture and enough energy to devote himself to the conquest of the soil.

So far as the white man was concerned, the perriod prior to the Civil War was an era when the farm hand was really an apprentice to the trade. The tools of agriculture were crude and the cultural processes were simple. The farmer's son, the immigrant and the bondsman worked for wages only so long as was necessary to obtain the needful instruction or to save the price of a few acres of land and secure the tools of the trade. When he had these, he became a farmer on his own account, either by the purchase of land in his home neighborhood or by migrating Westward to less settled regions.

The relations of the farmer and his hired man were, therefore those of social equals. The farm hand resided with the farmer as a member of his family—the old guild relationship of master and journeyman persisted longer on the farms than in any other industry—and, due to this near social equality, the class antagonisms so characteristic of capitalist society were very slow in developing.

But with the introduction of machinery on the farms, and the development of commercial or competitive farming, the condition of the rural population began to change. The cost of the machines with which the farmer could engage in the new farming and hold his own on a competitive market so greatly increased the capital necessary to embark upon the venture that the farm hand was forced to remain longer at his apprenticeship—the age at which men

started farming for themselves began to increase—and many who would have continued on the soil, gave up the idea and sought employment in the other industries which were being developed by leaps and bounds. Others contented themselves to start on a limited capital as renters or tenants, hoping to be able to purchase land a little later on.

In 1850 the number of farms was 1,449,000 and the working population on the farms was 4,082,000 persons. Of these, 34 1-2 per cent were land owners, 1 per cent were tenants, and 64 1-2 per cent were the children of farmers, wage hands and slaves. Thirty years later (1880) when the slaves had long been freed and the settlement of the Western lands was in full swing, the number of farms had increased to 4,009,000, with a working population of 7,714,000, and of these 44.2 per cent were land owners, 7.8 per cent were tenants, and 48 per cent were children of farmers and wage hands. The proportion of land owners had increased by 28 per cent, the farm hands, children, etc., had decreased more than 25 per cent, but the tenant farmers had increased 680 per cent. The development of the railroads and the opening of the homestead lands offset to a great degree the increased cost of farm equipment; yet, relatively speaking, there were 12 1-2 per cent less farmers in 1880 than there were in 1850—the working farmers, in comparison to the total population, had decreased one-eighth.

In 1900, twenty years later, the farm owners were 42.7 per cent of the working population on the farms, a decrease of about 3.4 per cent. The tenants had

increased to one-eighth of the farm population (22 3-4 per cent of the operating farmers), while the wage hands and children had decreased 1-15 to 44.8 per cent. During this period, machinery was displacing vast numbers of farmers for the total number of farmers in comparison to the total population had suffered a decrease of more than 11 per cent in the ten year period from 1880 to 1890, and from 1890 to 1900 it had practically held its own. The reason there was no comparative decrease in the farm population between 1890 and 1900 was because great numbers of men sought the farms during the hard times from 1893 to 1896, and immediately following this occurred the failure of the European wheat crop, which drove that cereal up to a dollar per bushel and suddenly made farming a profitable enterprise.

During this period the number of land owning farmers increased by 1,023,500 persons, the tenants increased 696,000, and the wage hands, children etc., increased 948,400.

Since 1900, the homestead lands have all been occupied, a great immigration of farmers from this country into Canada has taken place, and the price of land has gone up to almost fabulous figures—all of which have decreased the ratio of land owning farmers. In the nineteen years just past the number of land owning farmers has increased by 512,000 persons, a little more than half the increase in the previous twenty years. The tenants increased by 823,650, and the wage hands and others increased by 2,331,217.

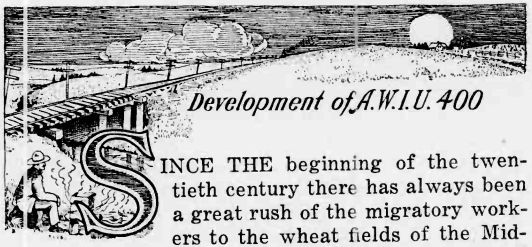
The land owning farmers are now 35.2 per cent of the working rural population, the tenants are 15.1 per cent (occupying 30 per cent of all the farms), and the farm hands, farmer's children, etc., equal 49.7 per cent of the tillers of the soil.

With the working population on the farms constituting but 13 per cent of the total population, we have arrived at the point where but little more than 4 1-2 per cent of that total are land owning farmers, a little less than 2 per cent are tenants, and the remainder (6.46 per cent), are the children of farmers and wage hands. The price of farm land and the cost of farm equipment has advanced to such a figure that the farm wage worker, with an average wage of less than $35 per month (1918), has a remarkably slim chance to become a farmer on his own account and that chance growing slimmer.

The farm hand of today is no longer the potential equal of his employer, and all the old show of social equality is rapidly disappearing; only in the backwoods sections can it yet be found, and there the farm hand is usually the son of a neighboring farmer and therefore carries the status of his father. In the most developed regions the same relations prevail upon the farms as are found in the other industries, with the exception that the work is largely seasonal and therefore the employment is irregular and precarious. The farm hand has become a migratory laborer, possessing all the characteristics of his industrial brother, and faithfully reflecting the influences of so unstable an environment. Robbed of

his hope of permanent economic advancement, he takes his place as a section of the great dispossessed —the agricultural proletariat.

UNCLE GOSH'S IDEA OF THE CLASS STRUGGLE
"B' gosh, ol' Izra Hinkens sez as how one o' thum W fellers threw his best plow horse in th' well——!"



Development of A.W.I.U. 400

SINCE THE beginning of the twentieth century there has always been a great rush of the migratory workers to the wheat fields of the Middle Western states. Many have gone in response to advertisements especially in the Eastern papers to the effect that big wages are being paid for the very commonest kind of work. Upon their arrival they usually found conditions to be of the very worst kind, long hours and small pay, instead of good wages, hours and conditions, as had been pictured to them.

The men were unorganized and therefore helpless until the Industrial Workers of the World came along and took the lead and organized the agricultural industry the same as many others.

Since the formation of the Industrial Workers of the World in 1905, much agitation had been carried on amongst the agricultural laborers, but it was not until the Agricultural Workers' Organization was chartered, April 21, 1915, that a real effort was made to organize the men following this line of work. The new organization proved a winner right from its inception, in spite of the fact that there were some who predicted dire failure and who were constantly raising the cry, "You cannot organize the harvest stiff."

While it is true that these few crepe-hangers were

proven bum prophets, there is no denying the facts that our task did appear to be almost a hopeless one, for the conditions in the harvest fields were indeed pitiful.

The long hours of hard work, the uncertainty of the job lasting any length of time, the poor food, and the poorer pay, together with the brutality of the small town marshal, hostile railroad shacks, the dangers from unscrupulous and merciless hi-jacks (hold-up men), all tended to weaken the stamina of the habitual harvest worker.

Nevertheless the job of organizing him was undertaken and none knew better the hard and difficult task it was to be than those that met at the first convention in Kansas City and those who first took out credentials in the new union of Agriculture Workers No. 400 at a time when the I. W. W. was almost financially and numerically bankrupt. It was under these most adverse conditions that the A. W. O. was launched.

No money in the treasury, the members almost penniless; but while there was a lack of finances, there was an abundant supply of courage and a will to do or die possessed by those who tackled the job and said it could be done.

With pockets lined with supplies and literature we left Kansas City on every available freight train, some going into the fruit belts of Missouri and Arkansas, others spread themselves over the states of Kansas and Oklahoma, and everywhere they went, with every slave they met on the job, in the jungles or on freight trains, they talked I. W. W., distributed their literature, and pointed out the advantage of being organized into a real labor union. Day in

and day out the topic of conversation was the I. W. W., and the new Agricutural Union No. 400.

On every hand stickers and leaflets calling on the harvest slaves to organize were prominently displayed; the delegates were everywhere; men who had never before heard of the I. W. W. and those who had heard of it were beginning to discuss the advisability of joining, and a great many of them did so.

After spending their last few dollars for iniatiation fee and dues and after a most successful drive through Oklahoma and Kansas, the delegates came right up into Nebraska and North and South Dakota and even into Canada, while others went into Montana and Washington and also Idaho.

Everywhere they went the good work went on; the organization gathered tremendous momentum all the way. Along with the large increase of the membership the status of the harvest stiff was perceptibly improved.

Small town marshals became a little more respectful in their bearing toward any group of workers who carried the little red card, and the bullying and bo-ditching shack had a wonderful change of heart after coming in contact with the No. 400 boys once or twice. As for the hi-jacks and bootleggers, one or two examples of "direct action" from an organized bunch of harvest workers served to show them that the good old days, at least for them, was now over, and that there was a vast difference between a helpless and unorganized harvest stiff and an organized harvest worker. But best of all, the farmer, after one or two salutory examples of solidarity, invariably gave in to the modest request of the organ-

ized workers, with the result that wages were raised, grub was improved, and hours shortened. Those farmers who have had full I. W. W. crews have been highly satisfied, and many stated that from that time on they would hire none but I. W. W.

And, so it has been with the agricultural laborers since 1915. Nearly every man who is eligible throws his whole spirit into the work of organizing and agitating his fellow man and many thousands of new members are taken in every year.

The I. W. W. came as a mighty boon to the harvest workers. What they have done for themselves in the past few years is but a marker in comparison to what will be accomplished in the future. With a considerable minority of farm laborers and harvest workers, organized and educated, with the knowledge of the principles of the Industrial Unionism, the rest of the world will be asking the Industrial Workers of the World, "What are we going to have for breakfast in the morning?"

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